A MODULAR BIPOLAR-CMOS-DMOS
ANALOG INTEGRATED CIRCUIT & POWER TRANSISTOR TECHNOLOGY

5   ## Cross-Reference to Related Applications   *new 2/8/06*

now US PATENT 6, 855, 985

This application is a continuation of Application No. 10/262,567, filed September 29, 2002, which is incorporated herein by reference in its entirety. This application is

now US PATENT 6, 960, 091

related to Application No. 10/218,668, filed August 14, 2002, and Application No.

now US PATENT 6,943,426 /

10/218,678, filed August 14, 2002, each of which is incorporated herein by reference in

10   its entirety.

Field of the Invention

This invention relates to semiconductor device fabrication and in particular to the fabrication, on a single semiconductor chip, of field effect and bipolar transistors or other semiconductor devices having the capability of being fully isolated from one another, and

15   having different operating voltage ratings. In addition, this invention relates to semiconductor devices having the characteristics of avoiding parasitic conduction between devices, suppressing noise and crosstalk between devices and circuits, and exhibiting other characteristics, such as producing nearly ideal current sources especially for use in analog and mixed signal applications, and producing robust low-resistance

20   power MOSFETs for the on-chip integration of power switches used in high-current or high-voltage power applications.

Background of the Invention

While many integrated circuits today are digital, comprising memory, logic, digital signal processing, microprocessors, logic arrays, and so on, a number of products

25   and electronic functions still rely on analog circuitry, either alone or combined with digital circuitry into mixed signal applications. Analog integrated circuits form a branch of semiconductor technology that is concerned with integrated circuits that operate in what is often referred to as the "analog" or "linear" circuit operating regime. In analog ICs, some of the integrated devices are used in power applications to switch currents, but